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**A New Species of *Rhopalorhynchus*
(Arthropoda: Pycnogonida)
from the Semporna Islands, Sabah**

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A pycnogonid specimen of the genus *Rhopalorhynchus*, collected from a sponge in shallow waters off the east coast of Sabah, is described as a new species, *R. cinclus*, showing a number of features unique for the genus, notably the anterior placement of the dorsal proboscis tooth, the presence of small latero-ventral proboscis teeth, the presence of a small main claw in a longitarsal species, a relatively short fifth palp article, and a simple distal oviger morphology (not subchelate).

Key Words: Pycnogonida, *Rhopalorhynchus*, Malaysia.

Introduction

During a diving survey off the east coast of Sabah, a specimen of sponge was collected from some 20 m depth on Bodgaya Reef, Semporna Islands. A single pycnogonid specimen collected from this sponge proved to be a new and wholly distinctive species of the colossendeid genus *Rhopalorhynchus*, with a proboscis morphology unique for the genus. The species is described herein as *R. cinclus*. The specimen has been lodged at The Natural History Museum, London (NHM). The sponge remains unidentified.

Systematics

Family **Colossendeidae** Hoek, 1881

Genus ***Rhopalorhynchus*** Wood-Mason, 1873

Rhopalorhynchus cinclus sp. nov.

(Figs 1–2)

Material. Holotype, mature female (registration No. NHM 2000.2754), Bodgaya Southern Rim Reef, Semporna Islands, off Sabah; 04°34.119'N 118°44.287'E; 7 October 1999, on a sponge at ca 20 m depth; coll. F. Dipper.

Description. Trunk (Fig. 1A) elongate, naked, typical of genus, fully segmented, segments 2 and 3 subequal in length, cephalon 0.4 times length of segment 2, segment 4 some 0.7 times length of segment 2; lateral processes at posterior ends

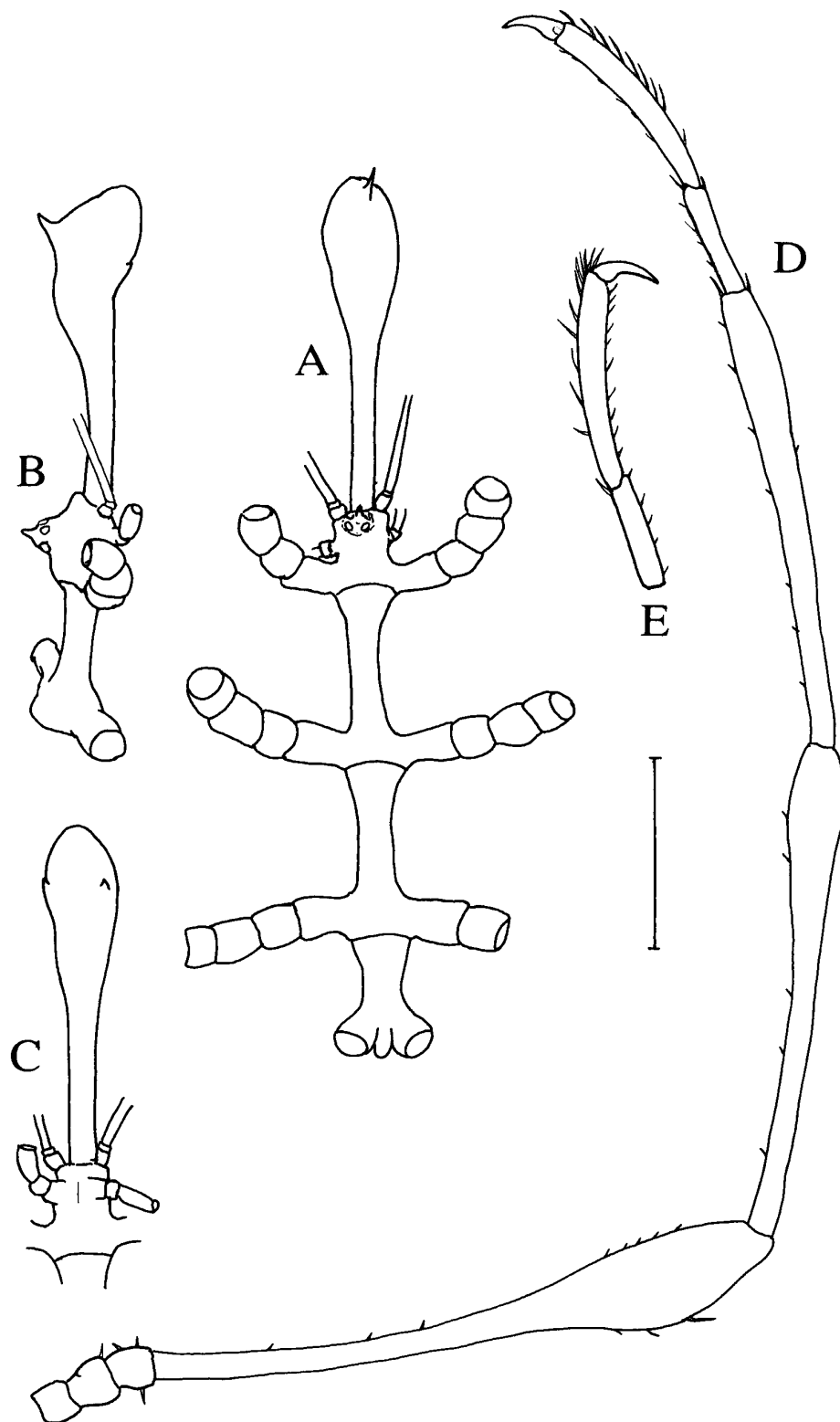


Fig. 1. *Rhopalorhynchus cinclus* sp. nov., holotype female. A, trunk, dorsal; B, anterior of trunk and proboscis, lateral; C, cephalon and proboscis, ventral; D, fourth leg; E, distal articles of third leg. Scale line=1 mm.

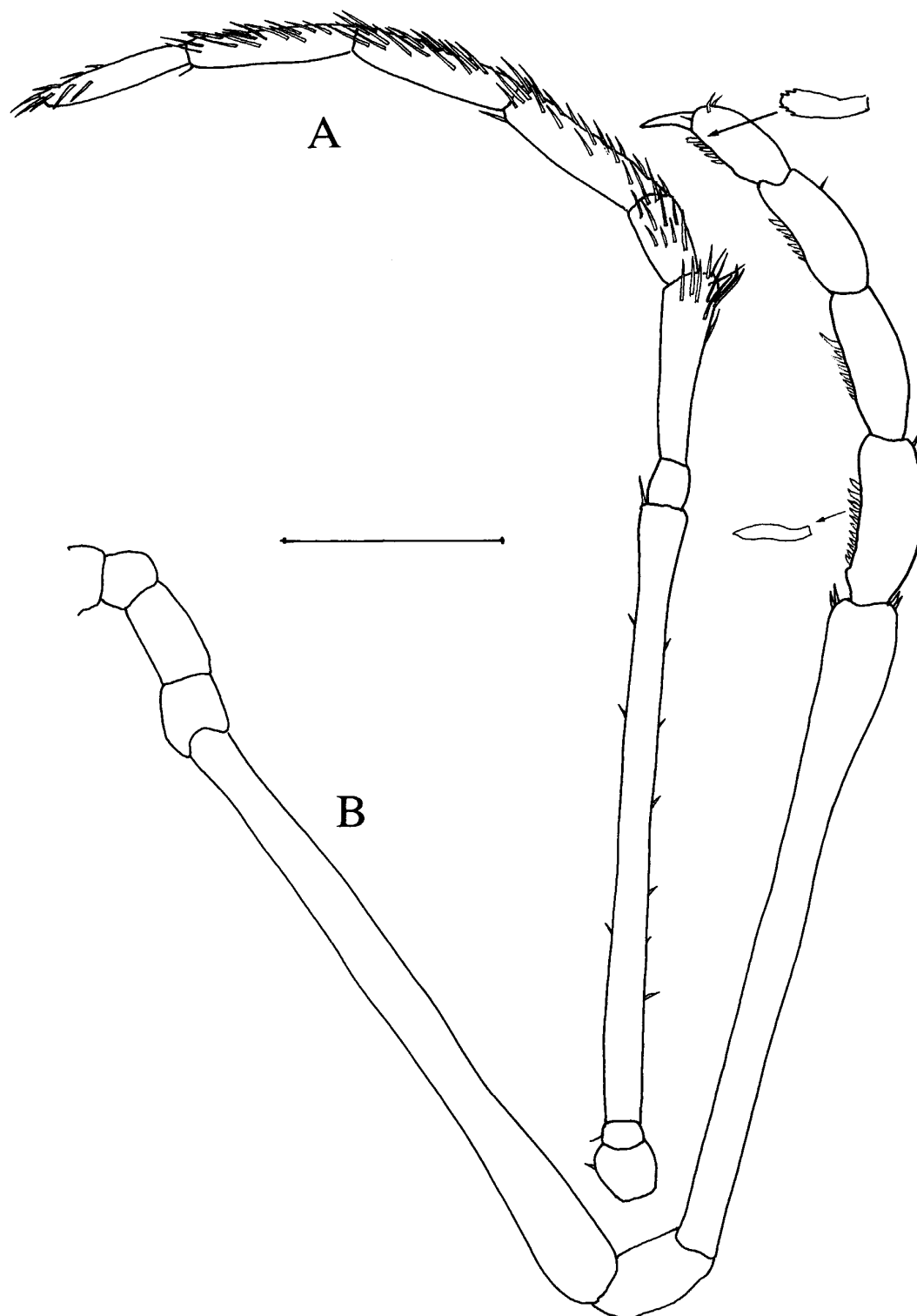


Fig. 2. *Rhopalorhynchus cinclus* sp. nov., holotype female. A, palp; B, oviger. Scale line=0.4 mm.

of segments and longer than minimum segment width, unarmed.

Ocular tubercle (Fig. 1A, B) dome-like, bearing distal spire, four eyes with slight hint of brown pigment (in preservative). Abdomen nearly as long as fourth lateral processes.

Proboscis (Fig. 1A–C) club-shaped, “stalk” marginally shorter than inflated part, with prominent dorsal tooth at 0.8 of length from base of proboscis, and 2 smaller latero-ventral teeth below dorsal tooth. Measurements (mm) using Stock’s (1958) formula for proboscis morphology: α (length proximal of dorsal tooth)=1.5; β (length distal of dorsal tooth)=0.39; γ (length of inflated part)=0.93; δ (length of stalk)=0.78; ϵ (maximum diameter)=0.45; ζ (distal diameter)=0.13.

Chelifora absent.

Palp (Fig. 2A) mounted at anterior edge of cephalon, with 10 articles, 3rd article (P3) 3 times length of P5, P6 half length of P7; P5 distally setose; P6 to P9 with dense ventral brushes of setae; P10 with fewer, distal setae.

Oviger (Fig. 2B) mounted ventro-laterally on cephalon anterior to first lateral process, 10-articled, 4th and 6th articles (O4 and O6) longest, subequal; O7 to O10 bearing 12, 8, 7, and 6 ventral oviger spines, respectively, distal spine on O10 serrated but not forming subchela with oviger claw; claw simple, shorter than O10 (tip broken in specimen).

Fourth leg (Fig. 1D) with small coxae; femur longest article, greatly swollen distally, large seta middorsally on swelling, otherwise sparsely setose; tibiae swollen distally, subequal, sparsely setose ventrally; tarsus about half length of propodus; propodus with thin ventral and dorsal setae; main claw one-quarter length of propodus, auxiliaries absent. Distal articles of third leg (Fig. 1E) similar, but propodus with dorsodistal brush of 6 setae. Length of tarsus+propodus+claw more than 0.8 times length of tibia 2 (longitarsal *sensu* Stock 1958).

Dimensions of holotype as in Table 1.

Etymology. Named in gratitude to Dr. Frances Dipper for giving me the specimen: the Latin name of the dipper, a cinclid water-bird, is *Cinclus cinclus* (Linnaeus, 1758) (noun in apposition).

Remarks. The extended genus *Rhopalorhynchus* was reviewed comprehensively by Stock (1958); subsequently those species without a dorsal proboscis tooth were moved to a separate genus, *Hedgpethia* (see Turpaeva 1973). *Rhopalorhynchus cinclus* sp. nov. is clearly a good member of the restricted genus, with its character-

Table 1. Measurements of holotype female (mm).

trunk length	2.83	leg articles	leg 4	leg 3
width across 2nd lateral processes	0.81	coxa 1	0.17	
abdomen length	0.14	coxa 2	0.23	
palp articles p3	1.18	coxa 3	0.20	
p4	0.09	femur	3.12	
p5	0.36	tibia 1	2.55	
p6	0.16	tibia 2	2.42	
p7	0.31	tarsus	0.59	0.58
p8	0.30	propodus	1.08	1.10
p9	0.30	claw	0.28	0.31
p10	0.28			

istic trunk segment proportions and ratios, club-like long articles of the leg (a character of mature females), and club-like proboscis with a prominent dorsal tooth. As Stock (1958) demonstrated, the region from Australia to the South China Sea and the Philippines holds a particular diversity of the genus, eight of the ten previously described species having been recorded from this area.

Since Stock's review, including a key to *Rhopalorhynchus* as restricted, two additional species have been described, viz. *R. claudus* Stock, 1974, a brevitarsal species from Barbados at 100 m depth, and *R. filipes* Stock, 1991, a brevitarsal species taken off New Caledonia in depths of 200 to 320 m (Stock 1974, 1991).

Rhopalorhynchus cinclus sp. nov. is a longitarsal species *sensu* Stock (1958) (the fourth leg is figured owing to its having become detached from the specimen; third leg proportions, which are normally cited, are, however, identical). However, it does not fit into his key at all, because of its unique proboscis morphology, particularly with the dorsal tooth in the anterior quarter of the proboscis. There is no evidence of any damage to the proboscis.

Within the genus as currently known, *Rhopalorhynchus cinclus* sp. nov. is unique in the anterior placement of the dorsal proboscis tooth (at some 0.8 of the proboscis length, 0.7 of the length of the inflated part), in the presence of additional small teeth latero-ventrally on the proboscis, in being a longitarsal species with a main claw 0.25 times the length of the propodus (other longitarsal species have a main claw half or more the propodus length), and in palp article 5 being only one third the length of palp article 3 (at least half the length of the latter in other species). Finally, the distal oviger claw does not form a subchelate structure with the distal oviger spine on article 10, although such a structure is thought to be present in all other species of *Rhopalorhynchus*.

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